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ABSTRACT

A study examined the morphosyntactic mechanism of a common code-switching (CS) pattern, the use of an English adjective (content morpheme) + Korean "-ita" (a system morpheme meaning "be") in the speech of Korean-English bilinguals. Data were drawn from audiotaped conversations of three subjects with their family members or bilingual friends and from CS utterances selected by the researcher from daily conversations. The discussion of results addresses two issues. First, the data did not suggest a theory of bound morpheme and equivalence constraints to be universally applicable to explanations of CS phenomena, but rather demonstrated that a matrix language frame model was more explanatory for Korean and English morphosyntax. Second, two possible explanations for the production of this pattern emerged: (1) a tendency toward nominalization in code-switching, or (2) a transfer of English grammar to Korean-based code-switching. (MSE)

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An Analysis of a Common Structure in Korean-English Code-Switching: A Test of the Matrix Language Framework

MI-AE LEE

This paper examines the morphosyntactic mechanism of a common code-switching (CS) pattern, the use of an English adjective (content morpheme) + Korean -ita (a system morpheme meaning "be") in the speech of Korean-English bilinguals. The data consist of audiotaped conversations of three participants with their family members or bilingual friends and of CS utterances selected by the researcher from daily conversations. The paper addresses two issues. First, according to the data, Poplack's bound morpheme and equivalence constraints do not seem to be universally applicable to explanations of CS phenomena. The present study, in fact, demonstrates that a matrix language frame model (MLF) is more explanatory than Poplack's model in terms of Korean and English morphosyntax. Second, the paper suggests two possible explanations for the production of English Adj + -ita. This study assumes that English Adj + -ita may result from (1) a tendency toward nominalization in CS or (2) a transfer of English grammar to Korean-based CS.

INTRODUCTION

Although code-switching (CS) is commonly observed in bilingual communities, there seems to be some disagreement in terminology within the literature. In general, CS can be defined as the use of two languages in a single speech situation. My research interest in CS focuses on the ability of Korean bilinguals—who have had no previous systematic learning—to grammatically weave two languages, Korean and English, within their speech communities. Such syntactic ability raises two questions: How do people control two conflicting grammars in one sentence? Why do people code switch more or less in certain situations?

In this study, I will focus on answering "What governs the context in which CS can occur?" To do so, I will review three studies: Poplack (1980); Poplack, Wheeler, and Westwood (1989); and Myers-Scotton and Jake (1995). Furthermore, I will examine how the models proposed in the three studies explain the structures of intrasentential CS data, especially with respect to Korean-English CS, and I will investigate how their assumptions were supported in data analysis.

1. OVERVIEW OF THREE STUDIES

Three studies—Poplack (1980); Poplack, Wheeler, and Westwood (1989); and Myers-Scotton and Jake (1995)—discuss intrasentential code-switching and propose different morphosyntactic approaches to CS analysis. Poplack (1980) analyzes the speech of twenty Puerto Rican bilinguals in order to support her hypothesis that the equivalence constraint can be used to rate bilingual ability. Poplack et al. (1989) attempts to validate the equivalence constraint on intrasentential code-switching on the basis of natural speech data from two typologically different languages, Finnish and English. Taking a perspective different from those two, Myers-Scotton and Jake (1995), supporting the matrix language frame model with extensive evidence from various languages, discusses implications of CS data regarding the nature of language competence and production, particularly in connection with the nature of lexical entries.

1.1 Principles of the Poplack and the Myers-Scotton Models

The following are summaries of the Poplack and the Myers-Scotton models.

1.1.1 Poplack's Constraint Model

Poplack proposes two syntactic constraints on code-switching: the bound morpheme constraint and the equivalence constraint. The bound morpheme constraint states

that CS cannot occur between a free and a bound morpheme. In Poplack's terms, "Codes may be switched after any constituent in discourse provided that the constituent is not a bound morpheme" (1980, p. 585). This means, for example, that an item such as *"*EAT-iendo"* meaning 'eating,' which consists of a Spanish bound morpheme *'-iendo'* affixed to an English stem *'eat'*, should not occur in Spanish-English code-switching "unless one of the morphemes has been integrated phonologically into the language of the other" (1980, p. 586). According to this constraint, there is no intra-word CS, except for the case of borrowing.

On the other hand, the equivalence constraint states that CS can occur where the surface structures of the languages are identical; that is, if a switch occurs at a boundary between two constituents that are ordered differently in the two languages, the resulting configuration will be ungrammatical by the standards of at least one of the languages. For example, for Spanish bilinguals, switching between nouns and adjectives as in *"*mi brother grande"* and *"*mi grande brother"* is not expected because the result would violate English word order or Spanish word order.

1.1.2 Myers-Scotton's MLF Model

While Poplack proposes the bound morpheme and equivalence constraints to explain code-switching, Myers-Scotton proposes a matrix

language frame model (MLF). The MLF model assumes that the two languages do not participate equally in intrasentential CS; that is, one language is dominant and thus projects the overall frame for intrasentential CS. Such a language is called the matrix language (ML). The ML, according to Myers-Scotton and Jake, provides more morphemes, especially system morphemes, in CS, and therefore speakers engaged in CS perceive the ML as the language that they are speaking at the time of actual utterance. Unlike the ML, the embedded language (EL), which is the guest language in CS, usually occurs as content morphemes in the grammatical frame projected by the ML.

This distinction between the ML and the EL leads to the prediction of three kinds of structural constituents in intrasentential CS: ML constituents, EL constituents, and ML+EL constituents.

1.2 Data Analysis Within the Two Models

The following describes how the two models differ in their approaches to data analysis.

1.2.1 Poplack's Data Analysis

Underlying Poplack's data analysis is a hypothesis that the data in the prohibited sites may not represent code-switching. In other words, Poplack claims that the bound morpheme constraint and the equivalence constraint make predictions about where CS can and cannot occur. In her 1980 study,

Poplack neglects such items like "BLANQUITO (whitey) friends" and "pechos (chest) FLAT" produced by Puerto Rican bilinguals (1980, p. 600). She believes that such outcomes, which do not follow grammatical rules shared by both L1 and L2, result from poor bilingual competence.

Interestingly, however, Poplack and her colleagues in their 1989 study of Finnish-English bilingualism find a strong tendency (79%) to inflect the English nouns in Finnish discourses, as in the example below (1989, p. 400):

Mä kerran lähetin sen tuonne
I once sent-lp. it-g. there-al
dry cleaner iin
-il

I once sent it to the dry cleaners there.

Poplack and her colleagues argue that such cases differ from CS because the morphological and syntactic treatment of the items is similar to that of established loan-words. Distinguishing this type of borrowing from CS, Poplack et al. use the term "nonce borrowing," which means "borrowing made only once or for a special occasion," and they further support the notion that the bound morpheme constraint and the equivalence constraint are still valid to explain CS.

1.2.2 Myers-Scotton's Data Analysis

Myers-Scotton and Jake introduce two important concepts, lemmas and congruence, to analyze CS data within their MLF model. They

define a lemma as "a carrier of lexical-conceptual structure and an associated predicate-argument structure and concomitant morphological realization patterns" (1988). Congruence, for Myers-Scotton and her colleague, refers to "a match between the ML and the EL at the lemma level with respect to linguistically relevant features" (1985).

According to these researchers, lemmas link a speaker's conceptual intentions with the functional structure and morphological patterns of a specific language. In other words, the speaker's communicative intention activates both lemmas of two languages, especially in the cases of intrasentential CS, and selects congruent EL lexemes in the direction of the ML frame. For instance, if the speaker finds "sufficient congruence" between the EL lemma and the ML lemma, then the EL lexeme that this EL lemma supports can appear in a mixed constituent (EL+ML) in this ML frame. The following Swahili-English CS datum illustrates this phenomenon (1994).

Leo si-ku-COME
today 1S/NEG PAST/NEG-come
na Ø-BOOK-S z-angu
with CL 10-book-s CL 10-my
Today I didn't come with my books.

On the other hand, if the speaker finds "insufficient congruence," the EL morphemes may appear in a bare form, in a *do* construction, or as an EL island. Myers-Scotton and Jake show the following example with Tamil-English CS

(1995) as an illustration of a bare form.

Avan enne CONFUSE paNNiTaan
he me confuse do-PAST
He confused me.

In this way, Myers-Scotton and her colleague demonstrate how the three kinds of constituents can be possible in intrasentential CS.

1.3. Implications of the Two Models

Poplack (1980) suggests that the code-switching mode proceeds from that area of the bilingual's grammar where the surface structures of L1 (the speaker's first language) and L2 (his/her second language) overlap. According to Poplack in the same study, although non-fluent bilinguals are able to code-switch frequently, they tend to maintain grammaticality in both L1 and L2 by favoring emblematic or tag-switching in which the segments may occur at any point in a sentence (in her terms, such CS is "extrasentential"). On the other hand, Poplack finds that those speakers with the greatest degree of bilingual ability favor intrasentential CS, which she hypothesizes to require the greater linguistic skill. In light of these findings, Poplack claims that code-switching may be a sensitive indicator of bilingual ability. To avoid misunderstanding of her conclusion, it is important to remember that Poplack counts only data that obeys the bound morpheme con-

straint and the equivalence constraint.

Poplack and her colleagues (1989), in keeping with the linguistic constraints already established by Poplack (1980), provide clear distinctions between CS and nonce borrowing. According to them, while code-switching is the alternation of two languages within a single discourse or constituent, nonce borrowing is a lexical form that is phonologically and morphologically woven into the base language and that may not occur again. Figure 1 shows the relationships among the processes (1989, p. 403).

Although Poplack and her colleagues try to defend the weaknesses of their claim by separating CS from nonce borrowing, they do not seem successful. According to those authors, nonce borrowings are lexical forms morphologically, syntactically, and phonologically integrated into L1. However, as is often the case, fluent Korean-English bilinguals (and perhaps other bilinguals) use English words or phrases with the original English pronunciations in their Korean sentences. (I mean by "fluent" here an intuitive understanding of the notion that

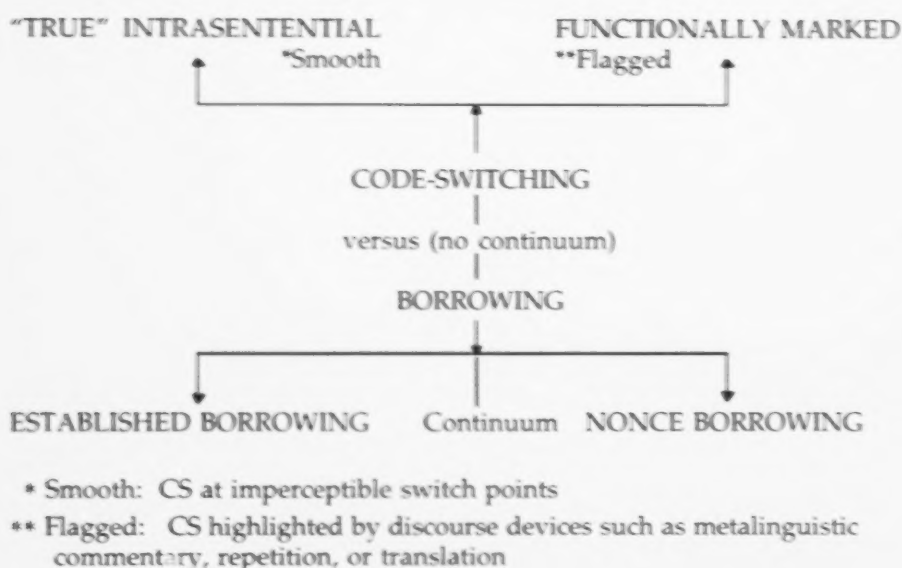


Figure 1. Relationships between CS and borrowing.
(Adapted from Poplack et al. (1989, p. 403)

members of the speech community evaluate.) If so, such cases may still remain different from nonce borrowings. Suppose that those cases above are nonce borrowings. How can the speakers embed the borrowed words into the base language without any grammatical errors? Would intrasentential CS ever be possible between languages that are typologically and morphologically different?

Contrary to Poplack's model, which cannot resolve these questions, Myers-Scotton's MLF model seems to explain better the various types of CS data. Their assumption that various types of congruence explain variation in intrasentential CS structures is fully supported by extensive CS evidence. Consequently, their model appears to lend itself to a better understanding of CS structures than do the syntactic constraints proposed by Poplack; in fact, Poplack et al. confess that "It is not our claim that the equivalence constraint is uniformly pertinent to every bilingual community, even to those in which mixing of the two codes is frequent at the intrasentential level" (1989, p. 390).

Indeed, the MLF model is much more powerful than that of Poplack. It may have the potential to explain language production far beyond the nature of CS itself in some universal sense. The notion of congruence, that is, of how an EL content morpheme is accommodated by an ML frame, has implications about which features characterizing the morpheme are critical and which are

peripheral at the level of lemmas, as Myers-Scotton and Jake mention (1019). Their hypotheses about lexical entries and congruence involving lexical-conceptual structure, predicate-argument structure, and morphological realization patterns provide a persuasive psychological-schema about how the human brain works in controlling what humans know and what they want to present.

2. **TYPOLOGICAL FEATURES OF KOREAN RELATED TO CODE-SWITCHING**

Given the two models of CS phenomena, this paper attempts to test the applicability of the MLF model to Korean-English CS data. Since Korean and English are morphosyntactically different, it is necessary to briefly look at some features of Korean germane to the present study.

Korean, as an SOV language, differs from English in various ways. Most of all, to understand the present study, one must appreciate the rich system of particles in Korean. These particles combine primarily with nouns and verbs. Particles attached to nouns signify case relationships and serve functions that are carried out by prepositions in English, as in the following example:

- (1) *nay-ka hankwuk -eyse*
 I-NOM Korea -LOC
 ku yak -ul sassta
 the medicine -ACC bought
 I bought the medicine in Ko-
 rea.

Some particles suffixed to nouns change the nouns into verb predicates. For instance, a large number of verbs are made up of noun + *-hata*. In other words, *-hata* combines with nouns and creates new verbs meaning "to do what the noun refers to," as shown in (2) and (3).

- (2) mal -hata
speech -do
to speak
- (3) kongpwu -hata
studies -do
to study

The verbalizer *-hata* can also be found in a number of adjective predicates in which *-hata* does not indicate actions at all. Instead, like adjective predicates in English, Korean adjective predicates with the form of *-hata* describe the state or property of their arguments as shown in (4) and (5).

- (4) moca-ka nolusulum -hata
hat-NOM yellowish -be
The hat is yellowish
- (5) J-ka cengswuk
J-NOM feminine modesty
-hata
-be
J is modest

Another particle, *-ita*, also combines with nouns, but indicates identity with its argument, as in "I am a teacher." The following example demonstrates the function of *-ita*.

- (6) J-ka haksayng -ita
J-NOM student -be
J is a student

In addition, particles added to verbs are inflected to indicate tense, degree of respect to addressee, conditionality, causality, and so on. The following examples show how particles attach to a verb.

- (7) il -ha -si- -ess-
-work-do (honorific) (past)
unikka
(bound morpheme 'because')
Because . . . worked
- (8) haksayng -iya
student -be (present, intimate)
be a student
- (9) kongpwu -haysse
studies -do (past, intimate)
studied

3. RESEARCH QUESTION

The observations that *-hata* creates an adjective predicate and *-ita* always combines with an N (or an NP) might lead monolingual Korean speakers to predict the structures English Adj + *-hata* and English N + *-ita* in order to make a proper predicate in Korean-based CS. However, the behavior of many speakers in their natural CS does not bear out this prediction. Table 1 shows contrastive examples of English Adj + *-hata* and English Adj + *-ita*. For purposes of simplicity, these

Table 1. Contrastive Examples of English Adj + *-hata*
and English Adj + *-ita*

<i>-hata</i> 'do' speakers	<i>-ita</i> 'be' speakers	gloss
NORMAL- <i>hata</i>	NORMAL- <i>ita</i>	'be normal'
SERIOUS- <i>hata</i>	SERIOUS- <i>ita</i>	'be serious'
NICE- <i>hata</i>	NICE- <i>ita</i>	'be nice'

examples do not include the original inflections. As will be demonstrated, those who have relatively strong English ability or relatively extensive exposure to English tend to produce English Adj + *-ita* rather than English Adj + *-hata*. Even more interestingly, some *-hata* speakers (mostly monolinguals) express an objection to the form English Adj + *-ita*. They complain that *-ita* speakers reveal their ungrammaticality and ignorance of the Korean language. Nonetheless, *-ita* speakers communicate with other speakers of Korean without any problem, and furthermore, the structure with *-ita* appears to be a shared pattern among a group of bilinguals, according to the data.

Such a phenomenon suggests that the underlying mechanism of the different linguistic behaviors could be approached from various perspectives. This study, however, attempts to look at the morphosyntactic properties based on the MLF model, rather than to examine psycholinguistic or sociolinguistic prop-

erties, and thereby reach a better understanding of how the bilinguals produce the linguistic pattern that is unexpected by Korean monolinguals and that would not be predicted by monolingual Korean grammar.

Thus, this study does not include all possible code-switching patterns; instead, the study focuses on the form of English Adj + *-ita*, which contrasts sharply with the forms used by Korean monolinguals.

4. DATA

The data under consideration in this paper were obtained by audio-taping three Korean-English bilinguals while they had a natural conversation with their bilingual friends or family members. The participants were DJ, a male college student (22) who immigrated into the U.S. at the age of 5; SM, a female college student (21) who was American-born and raised by Korean-speaking parents; and RB, a male college student (25) who came to the U.S. when he was 11 years old. These partici-

pants can be described as English-dominant bilinguals.

I also selected data on CS patterns from observations of daily conversations, especially from speakers who have lived in the States more than 8 years. Most college students in their early to mid-20s. Those speakers can be characterized as Korean-dominant bilinguals.

As far as coding is concerned, I paid most attention to intrasentential CS within the matrix language (ML) of Korean. Of those productions, I attempted to transcribe only the relevant utterances and ignored sentences that were not clearly audible or had English as the ML. The transcription of Korean followed the Yale System of Romanization. In the end, a total of 105 relevant utterances were extracted from 3 hours of tape recording and additional note-taking. (See Appendix.)

5. DATA ANALYSIS

The data argue against the universality of the syntactic constraints by Poplack, which, according to her 1980 study, fail to address various problems derived from morphological disparity (the bound morpheme constraint) and word order differences (the equivalence constraint) between two languages in a single sentence. More than 30% of the extracted intrasentential CS violates the bound morpheme constraint, the equivalence constraint, or both. Relevant examples are-

compete -ACC can't do
(intimate)
can't compete with

- (11) darunday SPEND TIME
something else spend time
-ul mani hay
-ACC much do (intimate)
(I) spend much time on something else

The Korean bound morpheme *-ul* switches the English content morphemes, the V in (10) and the VP in (11), into nominals within the ML frame. Not only do (10) and (11) violate the bound morpheme constraint, but the sentences do not follow the Korean word order; V or VP normally comes at the end of sentence in Korean syntax. In other words, the numerous Korean-English CS cases exemplified by (10) and (11) contradict the claim that no switching may take place between two morphemes that are morphologically bound to each other or that are differently ordered in the two languages.

In contrast, the MLF model of Myers-Scotton seems to present a reasonable resolution to the research question. First, the hypothesis concerning three possible kinds of constituents (the ML constituent, the embedded language (EL) constituent, and the mixed constituent) in the MLF model seems to sufficiently explain the following data:

- (10) COMPETE-ul mothay

- (12) TRADE CONFLICT-i isse
a trade conflict -NOM there is
-se
-CONJ
There is a trade conflict and so
- (13) ONE AND A HALF CLASS-
one and a half classes
(ul)¹ SKIP haysse
(-ACC) skip do (intimate,
past)
*(I) skipped one and a half
classes*

Example (12) contains the mixed constituent (the EL content morpheme + the ML system morpheme), which implies that the speaker found sufficient congruence between the EL lemma and its ML counterpart. Example (13), however, shows the presence of the EL constituent. In this case, because of "insufficient congruence" at the level of lemma, the speaker needed to use a compromise strategy, which resulted in the EL island + do-verb construction. In this regard, the MLF model seems to explain the structure of the English content morpheme of adjective plus the Korean system morpheme of *-hata*.

Yet, there still remains the problematic form of English Adj + *-ita*. Looking closely at the CS patterns produced by the bilinguals, this study suggests two possible explanations for the structure of English Adj + *-ita*; namely, the structure may come from either (1) a tendency toward nominalization in CS or (2) a transfer of the EL grammar to CS.

5.1 A Tendency Toward Nominalization in CS

A strong tendency toward nominal CS and nominalization may lead the speakers to treat English adjectives as nouns in the process of Korean-English CS. The data indicate that 46% of the intrasentential CS corpus excluding proper nouns involves nominals. The most common types of nominal CS are English N(P) + case-marker, as in (14), and English N(P) + time- or location-marker, as in (15):

- (14) A LOT OF PEOPLE -ka
a lot of people -NOM
mani kakilohaysse?
many be going to go
*Are there a lot of people who
want to go?*
- (15) SUNDAY MORNING -ey
Sunday morning -TIME
yeki olkeya?
here be going to come
*(Are you) gonna come here
on Sunday morning?*

In addition to the rich evidence from nominal CS, the data show that bilinguals tend to nominalize any part of speech from the EL within the ML frame. The following utterances demonstrate how the speakers interweave the two languages:

- (11) darundey SPEND TIME -
something else spend time
ul mani hay
-ACC much do (intimate)

(I) spend much time on something else

- (16) ME TOO -ya
me too -be (inflected form of -ita; intimate, present)
Me, too
- (17) PROFESSIONAL² -chelem
professional-like
ip -ko
dress -CONJ
(I) dress like a professional woman and
- (18) enu INTANGIBLE³ -i
something intangible -NOM
towum-ul cwulswuissta
help -ACC may give
Some intangible thing may give (me) help.

The speakers nominalized the VP as in (11), the S-bar as in (16), and the Adj as in (17) and (18). The proportion of nominalization thus amounts to nearly 10% of the data, without counting English Adj + -ita. It seems that the strong tendency toward nominal CS may nominalize any EL constituent as a default under certain circumstances. Therefore, this study assumes that the strong propensity for nominalization in CS may have impact on the structure of English Adj + -ita.

5.2. A Transfer of English Grammar

For the second possible account of the problematic structure of English Adj + -ita, the current study

suggests that the transfer of English grammar as a cause; that is, when the speaker chooses an English adjective as the EL at the conceptual level, he or she may then require "be" in order to construct a predicate based on the chosen lexeme. At the same time, the speaker activates the ML morphosyntactic bundle of the ML counterpart whose lemma is directing the projection of the sentential frame. As a result, English *be* is realized as the Korean -ita, which means "be," for the proper system morpheme. Therefore, the bilinguals naturally produce sentences like (19) and (20) below.

- (19) kyay-n SERIOUS -ya
that person-TOP serious be
(-ita: intimate, present)
(Linda,) she is serious
- (20) CLASS-ka FULL -iya
class -NOM full be (-ita: intimate, present)
The class is full

One can find extensive evidence to support the argument that English grammar is transferred into Korean-based CS. The most obvious clue is that the bilinguals frequently omit Korean system morphemes, such as case-markers or locative markers, which are postpositions, as in the following examples.

- (13) ONE AND A HALF CLASS
one and a half classes
(-ACC) SKIP haysse
skip do (intimate, past)

- (1) *skipped one and a half classes*
- (21) STUDY ROOM (LOC)
study room
kassesse
go (intimate, past)
(1) *went to the study room*
- (22) HOW MANY PEOPLE (NOM)
how many people
wasse?
come (intimate, past, interrogative)
How many people came?

This pattern seems to appear because English does not have a morphological system like that of Korean.

Further evidence can be found in the word order not only in the CS data but in their "Korean only" sentences as well. Examples are-

- (23) *mot* STUDY hayyo
cannot study do (honorific, present)
(Canonically, "STUDY *mot* hayyo")
(1) *can't study*
- (24) kongpwuhaysse *mani*?
study (intimate, past) a lot
(Canonically, "kongpwu *mani* haysse")
(1) *Did you study a lot?*

In addition to the variations in system morphemes and word order, participants also sometimes used English intonation, English phonology, and English-influenced

Korean lexical choice in Korean-based CS or Korean-only sentences. The following example from MS's phone conversation with her mother shows how English transferred to her CS:

- (25) Mommy, last week (-ey)
Mommy last week (-TIME)
nay -ka cip -ey
I -NOM home -LOC
onkeya?
come⁴ (intimate, present, interrogative)
Mommy, last week did I come home (was it last week when I was there)?

In such telephone conversations, Korean monolinguals would not use "come" but "go," whereas English speakers choose "come" to take into account their listener's location.

6. DISCUSSION

Within the MLF model, this study explores the morphosyntactic mechanism of a particular CS structure by Korean-English bilinguals. The analysis supports Myers-Scotton's claim that the congruence hypothesis of the MLF model seems generally applicable to the current data.

However, the analysis indicates that language production regarding CS phenomena is in reality far more complicated than the schema Myers-Scotton and Jake (1995) show. Indeed, it is so complicated that the dichotomy between the EL lemma and the ML lemma appears a bit fuzzy at some level.

The ambiguity appears in the Adj + *-ita* data of this study and in the double morphology data concerning plural and infinitival affixes in Myers-Scotton and Jake. (1995, p. 999).

In the present study, a possible reason for English Adj + *-ita* in Korean-English CS is that the CS structure seems to result from the activation of both the EL and the ML at the functional level. In other words, it is assumed that after selecting the EL content morpheme, the speakers choose the proper predicate-argument structure in the EL lemma and the proper morphological realization pattern in the ML lemma. While Myers-Scotton and Jake (1995) assume that the appearance of both morphemes may be a "mistiming," the present study suggests the likelihood that these English-dominant bilinguals may have a certain portion of mixed lemmas involving their two languages. The intersection of two lemmas may allow bilinguals to produce their own structures.

The current analysis also finds that there seems to be a relationship between the use of English Adj + *-ita* and speakers' linguistic behaviors deriving from their contact with the two languages; that is, the bilinguals who have been exposed to the two languages from birth or before their critical period show a consistency of using English Adj + *-ita*. On the other hand, speakers who have had contact with L2 after their critical period and have had relatively short exposure to the bilingual context preferred English Adj + *-hata*. In fact,

some of those who have recently come to the U.S. for their graduate studies tend to regard English Adj + *-ita* as the wrong form.

The most interesting speakers are those who immigrated in their mid-teens and have lived in a two-language setting for a relatively long time, that is, more than 8 years. They use both structures, although the reason is not clear yet. Again, this relationship implies that there may be mixed lemmas for the two languages, depending on the properties of particular cases of bilingualism. However, to make a stronger argument, the current study needs to include a broader range of participants and data.

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NOTES:

1. The entire utterance as it would be in Korean normally contains *-ul* for an accusative marker.
2. Korean monolinguals would expect the following:
PROFESSIONAL-~~hakey~~ ip -ko
professional-adverbial suffix
dress -CONJ
3. I understood this utterance as "something which is uncertain yet may give me help." There is a possibility that my interpretation differs from the speaker's intention. Therefore, it might have

been helpful to have had a playback session with the participants.

2&3. Frankly speaking, I struggled with these utterances while analyzing the data. Although "professional" and "intangible" can be both a noun and an adjective, it seems that Korean monolinguals tend to treat them only as adjectives in their Korean-English sentences. Consequently, Korean monolinguals may produce sentences different from those that these bilinguals uttered.

4. Although she used the present tense of *come*, the speaker obviously meant the past tense. In fact, these bilinguals sometimes showed Korean grammatical errors, which seemed to be repeated, but this paper ignored such grammatical errors, for this issue was out of scope of the current study.

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Appendix

The Yale System of Romanization
 (' marks a tense consonant)

Hangul	Yale	Basic Phonemic Realization	Hangul	Yale	Basic Phonemic Realization
ㅂ	p	/p/	ㅣ	i	/i/
ㅃ	ph	/ph/	ㅍ	wi	/wi/
ㅍ	pp	/p'/	ㅑ	ey	/e/
ㅌ	t	/t/	ㅓ	yey	/ye/
ㅍ	th	/th/	ㅕ	wey	/we/
ㅊ	tt	/t'/	ㅖ	oy	/æ/
ㅅ	s	/s/	ㅗ	ay	/e/, /æ/
ㅆ	ss	/s'/	ㅛ	yay	/ye/, /yæ/
ㅈ	c	/č/	ㅜ	way	/we/, /wæ/
ㅊ	ch	/čh/	ㅡ	u	/u/
ㅉ	cc	/č'/	ㅜ	e	/ə/
ㅋ	k	/k/	ㅠ	ye	/ya/
ㆁ	kh	/kh/	ㅑ	we	/wə/
ㆁ	kk	/k'/	ㅓ	a	/a/
ㄴ	m	/m/	ㅕ	ya	/ya/
ㅇ	ng	/ŋ/	ㅗ	wa	/wa/
ㄹ	l	/l/	ㅜ	wu	/u/
ㅎ	h	/h/	ㅠ	yu	/yu/
			ㅓ	o	/o/
			ㅛ	yo	/yo/
			ㅕ	uy	/ui/